



Federal Communications Commission
Washington, D.C. 20554

February 23, 2007

DA 07-817

Lawrence J. Movshin, Esq.
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2300 N Street, N.W., Suite 700
Washington, DC 20037

Dear Mr. Movshin:

This is in response to your letter of October 15, 2005 filed on behalf of MPH Industries, Inc. (MPH), requesting determination and confirmation of Commission rules that would apply to radiolocation devices it is considering developing to assist public safety entities in enforcing traffic safety laws.¹ MPH provides limited information describing two separate radiolocation devices currently under consideration for development.² MPH represents that the devices would be designed to operate in the 24.05-24.25 GHz and/or 33.4-36.0 GHz bands, and indicates that the emissions from the devices will be frequency modulated with a 50 kHz square wave, with a total deviation of less than 100 kHz.³ MPH denotes that one device would operate with an occupied bandwidth of 100 kHz or less and the other device would operate with an occupied bandwidth of up to 500 kHz.⁴

MPH requests confirmation that OET Bulletin No. 37 (Bulletin 37) is still applicable to radiolocation devices operating in the 24.05-24.25 GHz band, and seeks guidance on procedures for coordination with the Federal Government.⁵ MPH is particularly interested in knowing 1) if additional technical showings are required for this coordination, 2) if manufacturers may interact with the Federal Government entities, and 3) how long coordination takes for a radar device with the above listed technical requirements.⁶ Further, MPH requests confirmation that the Federal Government coordination procedures are the same for operations in the 33.4-36.0 GHz bands as those for operations in the 24.05-24.25 GHz bands that do not comply with Bulletin 37.⁷

Additionally, MPH requests confirmation that Section 90.103(c)(22) of the Commission's Rules⁸ still applies to radar operations in the 24.05-24.25 GHz band.⁹ Furthermore, MPH seeks clarification that Section 90.103(c)(22) 1) requires unmodulated continuous wave emissions to be used at 24.125 GHz; 2) permits unmodulated continuous wave emissions at 24.10 GHz and in the 24.20-24.25 GHz band; and

¹ See Letter from Lawrence J. Movshin, Wilkinson Barker Knauer, LLP, Counsel to MPH Industries, Inc., to Bruce Franca, Acting Chief, Office of Engineering and Technology, dated October 21, 2005 entitled *Type Acceptance of Proposed Part 90 Law Enforcement Radar Devices at 24.05-24.0 GHz and/or 33.4-36.0 GHz* (Request).

² See *id.* at 1.

³ *Id.*

⁴ *Id.* at 1, 2.

⁵ *Id.* at 2.

⁶ *Id.*

⁷ *Id.*

⁸ 47 C.F.R. § 90.103(c)(22).

⁹ See Request at 3.

3) permits the entirety of the 24.05-24.25 GHz band other than 24.125 GHz to be used to modulate a radiolocation device for ranging purposes.¹⁰

We note that the Radiolocation Service accommodates the use of radio methods for determination of direction, distance, speed, or position for purposes other than navigation.¹¹ The Radiolocation Service is governed by rules contained in Subpart F of Part 90 of the Commission's Rules.¹² Additionally, the Part 90 rules contain General Technical Standards under Subpart I of the Part 90 rules.¹³ Further, any transmitter used for the radiolocation service must satisfy the equipment certification provisions of Section 2.803 of the Commission's rules as detailed in Section 90.203(d).¹⁴

We can confirm that Bulletin 37 still applies for radar operations in the 24.05-24.25 GHz band.¹⁵ Given the limited information contained in the filing we are unable to determine if the devices under consideration for development would completely satisfy the technical requirements of Bulletin 37. It is important to note that, as long as the radar device complies with the technical requirements of Bulletin 37, the application for equipment authorization is not required to undergo coordination with the Federal Government.¹⁶

If the radar equipment fails to satisfy the technical requirements of Bulletin 37, the equipment authorization application would undergo coordination with the Federal Government.¹⁷ In this instance, the device that would utilize an occupied bandwidth of less than 100 kHz would not require coordination with the Federal Government, provided it satisfies the remaining criteria of Bulletin 37. However, the device that would operate with an occupied bandwidth of 500 kHz clearly would not satisfy the technical requirements of Bulletin 37 and the equipment authorization application would require coordination with the Federal Government.¹⁸ In addition, the equipment authorization application for any radiolocation operation in the 33.4-36.0 GHz band would require coordination with the Federal Government because non-Federal Government operations are secondary to Federal Government operations and there is no equivalent to Bulletin 37 for operations in the 33.4-36.0 GHz band.

There are no established timeframe guidelines for the length of a successful coordination. There is an established method the FCC utilizes to coordinate equipment authorization applications with the

¹⁰ *Id.*

¹¹ *See* 47 C.F.R. § 90.101.

¹² *See* 47 C.F.R. §§ 90.101-90.103.

¹³ *See* 47 C.F.R. §§ 90.201-90.219.

¹⁴ *See* 47 C.F.R. § 2.803; *see also* 47 C.F.R. § 90.203(d).

¹⁵ In addition, we can confirm that Bulletin 37 also specifies that the occupied bandwidth shall not exceed 100 kHz; the transmitter mean output power shall not exceed 0.2 watts; radio frequency voltages of spurious and harmonic emissions at the antenna terminals shall be 36 dB below the mean output power; the field strength for spurious and harmonic radiations shall be at least 36 dB below the mean output power from the transmitter; and the antenna characteristics are limited such that the product of the output in watts and antenna gain in terms of power ratio shall be no greater than 63.25, the antenna 3 dB main lobe beamwidth shall not exceed 15 degrees, and the antenna minor lobe levels shall be at least 22 dB below the main lobe level.

¹⁶ *See* Bulletin 37 at 2.

¹⁷ *Id.*

¹⁸ *Id.*

Federal Government. If the FCC requires additional information to effect the successful coordination of the equipment authorization application, MPH may be invited to participate in the coordination process.

MPH should also be aware that any objection by the Federal Government to the proposed operation will be considered when making a public interest finding on an application for equipment authorization, as required by Section 2.915(a)(2) of the Commission's Rules.¹⁹ In addition, such objection by the Federal Government may result in denial of an equipment authorization application pursuant to Section 2.919 of the Commission's Rules.²⁰

Moreover, it is important for MPH to recognize that the successful coordination of an equipment authorization application for the devices described in its filing does not guarantee that all potential licensees will be able to obtain a license from the FCC to operate these devices. This is because the primary users of the frequency band may object to operation of the radiolocation equipment at certain locations around the country due to the potential for interference to existing primary user operations.

With regard to MPH's request concerning Section 90.103(c)(22), we can confirm that this section still applies to the radiolocation service and it does require unmodulated continuous wave emissions on 24.125 GHz and permit unmodulated continuous wave emissions at 24.10 GHz and in the 24.20-24.25 GHz bands. As to MPH's request that we interpret the note to permit the entirety of the 24.05-24.25 GHz band other than 24.125 GHz to be used to modulate a radiolocation device for ranging purposes, we are unable to confirm that the entire band (except for 24.125 GHz) can be used for ranging purposes because it is unclear from the filing as to how this operation would occur and thus we can not determine how it may satisfy or conflict with Bulletin 37.

I trust that this letter is responsive to your inquiry. Should you have additional questions regarding this matter, please contact Mr. Rodney Conway by telephone at (202) 418-2904 or by email at rodney.conway@fcc.gov.

Sincerely,

Scot Stone
Deputy Chief, Mobility Division
Wireless Telecommunications Bureau

¹⁹ See 47 C.F.R. § 2.915(a)(2).

²⁰ See 47 C.F.R. § 2.919.